## CHAPTER I

## INTRODUCTION

### 1.1 The Background of the Study

Language is the most important aspect in the life of all human. It uses to express inner thoughts and emoticon of human to establish rules and maintain cultures. The use of language is a general concept that is referred to the cognitive ability of human to communicate with the other which is used as systems communication. People use language to communicate with another by using language in the world. There are many languages in the world that people used. One of the most important international language that is needed to learn is English.

English is one of the formal subjects that are included in the curriculum. It has been taught from the primary up to university level. The Department of National Education has made English as a compulsory subject and positioned it as the first foreign language to be taught in school based on the curriculum.

There are four language skills namely: listening, speaking, writing and reading. To achieve the four skills, it is important to master language components namely: vocabulary, grammar, and pronunciation.

One of the language components that holds an important role is vocabulary. We can see that in speaking skills, the student cannot speak English because they have limited vocabulary. In reading and listening skills, the student cannot understand what they read and listen, because they lack vocabulary. The fact is without grammar very little can be conveyed, without vocabulary, nothing can be conveyed.

Vocabulary is one of the important things in learning English. Learning vocabulary for young learner is fundamental because the ability of students to learn English especially to read as well as to comprehend the subject is determined by vocabulary competence if the learners have no or lack vocabulary and the ability to communicate and to convey their need could not be established. Beside that, vocabulary is one of the important elements in building up English. It is impossible to express our ideas, emotion, feeling, and desire without vocabulary. The mastery of vocabulary becomes very essential for the students to learn a language, whether as a second language or as a foreign language. The main factors faced by students in comprehending a text is the lack of vocabulary. The English teacher should have challenging task to find ways to motivate students to learn English. Teaching vocabulary has been presented in so many method and techniques, and should be taught in various ways so that the students can be interested in learning it.

Up go now, many teacher have not still used any teaching media as the aid in improving the students' vocabulary and as the variety of teachers' techniques of teaching of classroom. Meanwhile, the effort to increase the students' vocabulary by using playing media has not grown well. Quite a few teacher using games or other media during any of the lesson. The great teaching strategy is very important to make teaching and learning process in the class work fluently and to make condition in the class more conducive. One of great strategies in teaching language is by using game(Thornburry, 1999: 22).

The students faced many problems dealing with vocabulary. Those problems are: first, students were lazy to memorize all the unfamiliar words that they heard or
read in a text. Second, students had difficulties in understanding and comprehending the meanings of unfamiliar words. Third, students were bored and unmotivated to learn.

However, learning English vocabulary using games has an important role for teacher and students. The first, as students, they have strong and good motivation to deepen English language. The second, they are easy to accept the English language because they learn by playing games that nowadays has been grown and developed in Indonesia. The third, teaching English vocabulary using games can help teacher in teaching learning process.

One of the games that will be practiced here is Noughts and Crosses game. The Noughts and Crosses game is one of the techniques in teaching vocabulary. There are many reasons why games are very important in teaching vocabulary. The other reason for including games in the language class is to create a communicative game so the students can improve both the speaking skill and vocabulary mastery. This game will be applied to the second year students to improve their vocabulary in learning English because they have fun and relax. Beside that, if we want to make students more interest in learning English, they should have strong motivation. If the students are motivated to learn something he or she can do much more than anyone would have predicted was possible. Converecely, if the students are not particularly interested in learning something, result of learning may not even close capability. Therefore, they are not worried and fearful to express their idea, thought, and opinion.

The change of classroom situation is very essential to avoid the learners from being stressed and frustrated. Based on the items, it is possible to use Noughts and

Crosses game in order to increase the young learners' mastery of vocabulary. In related to the explanation above, the researcher is interested in conducting a research under the title "Improving students' vocabulary through Noughts and Crosses Game". The researcher also tries to help the students to reach the first three stages which are remember, understand, and apply. Therefore, the students are hoped to remember the words, understand the words, then they can apply the word whether in spoken or written form. Furthermore, the media which will be applied in this research is Noughts and Crosses Game.

In addition, Noughts and Crosses Game are used to develop an interest in every word. Therefore, the students are curious to dig more information about the word and it is likely to improve their vocabulary. In order to solve the students' problems in learning vocabulary, the researcher proposes Noughts and Crosses Game as the media to teach vocabulary. The researcher thinks that Noughts and Crosses Game is one of the media that can be used to teach vocabulary effectively. Therefore, the researcher applies Classroom Action Research to overcome the students' problems in learning vocabulary.

Based on the researcher experience in observation at the second grade of SMP Swasta Methodist 7 Medan it was difficult to write narrative text. The student's are difficult to comprehend the main idea of the narrative text, some of the student's difficult to write narrative text, some of the student's are not able to find the meaning of vocabulary in narrative text, and some of the student's difficult to write the grammar clearly. When he/she told them to tell some information from their narrative
next, most of them did not have any ideas or opinions to be able to write correct sentences and arrange them into a good paragraph.

TABLE 1.1
The result of the pre-observation

| NO | Student's <br> Name | Sentences | ADJ |  | NN |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

ADJ : Adjective
NN : Noun
V : Verb
ADV: Adverb

| Total Score | $=1605$ |
| :--- | :--- |
| Total Data | $=28$ |
| Mean | $=1.605 / 28=\underline{57,32}$ |

Based on the data, about the second grade students of SMP Swasta Methodist 7 Medan get only 57,32 for score vocabulary. The lowest criteria for stating students achieve completeness (KKM) at least 70. They were lack understanding the meaning of text and find less vocabulary meaning.

### 1.2 The Problem of the Study

Based on the background of the study, the problem of study is formulated as follows, Does the use of Noughts and Crosses Game improve the students' vocabulary?

### 1.3 The Objective of the Study

The objective of this research is to find out whether Noughts and Crosses Game improve the students' vocabulary.

### 1.4 The Scope of the Study

Based on the background above, the writer limited the research just focus to improve the students' vocabulary through Noughts and Crosses teaching media. Acording to Thornbury (1997:3) there are some classes of vocabulary. They are nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunction and determiner. In this study, the writer limits the vocabulary on nouns. Besides that, there are also many types of games, such as; flash card, noughts and crosses games, chess, checkers. The writer limits the game on Noughts and Crosses game.

### 1.5 The Significances of the Study

The findings of this study are expected to be theoretically and practically relevant for some matters:

1. Theoretically
1.1 The result of the research can be a new model of research in teching media for teaching vocabulary.
1.2 The result of the research can give a new perspective in teaching vocabulary by using Noughts and Crosses media to give a new alternative in teaching vocabulary.

## 2. Practically

The finding of the study is expected to be useful for:
1.1 The researcher is expected to help the students learn vocabulary easily, effectively, and happily using Noughts and Crosses Game.
1.2 The researcher is expected that English teacher can use Noughts and Crosses Game as a media to introduce new words in vocabulary learning and also able to elaborate more the media and technique which is interesting to teach vocabulary to the students.
1.3 The researcher is expected that future researchers are able to develop more about the use of Noughts and Crosses Game to teach vocabulary.

## CHAPTER II

## REVIEW OF RELATED LITERATURE

### 2.1 Theoretical Framework

It is important to classify some terms which will be used in the research in order to avoid misinterpretation and confusion in comprehending the ideas especially for the readers. Therefore, the following terms are intended to specify the content of the research.

### 2.2 Students' Vocabulary Achievement

The most common type of achievement is standardized progress in developing the measurable skill and knowledge learned in given grade level, usually through planned instruction. The students' achievement means that the students can learn successfully and improve their study with their effort and skill. Hornby (2000:11) defines ''achievement' as (1) a thing that somebody has done successfully, especially using his own effort and skill (2) the act or process of achieving something.

The success of students in finishing something is through the skill, practice or performance. Students' achievement in the performance is shown by their ability to speak. Most of us speak easily and effectively when we use words with which we are familiar. If we describe everyday words, occurrence in everyday words our sentences take shape without effort and the person with whom we are speaking knows exactly what we mean. Sometimes we find that we can not say precisely what we have in mind if we limit ourselves to word with which we are entirely familiar; and it is then that we feel the need for enlarging our vocabulary. At other times for instance in writing letters-we find that familiar words will express our meaning well enough,
but that in order to give variety and color to what we are writing we must occasionally use a less familiar word. Mallery (2005: 12) 'When we say that someone has a good vocabulary we mean that he or she is familiar with a large number of words and uses them appropriately and accurately'. Your vocabulary is the stock of words on which you can draw in expressing yourself. Most of us do not use nearly as many words in speaking or writing as we recognize or understand when we hear them or see them. It is therefore desirable and helpful to classify the words we know as belonging either to our use vocabulary or to our recognition vocabulary.

### 2.3 Vocabulary

Vocabulary is one of the components of language and that no language exists with words. Words are the signs or symbols for ideas. They are the means by which people exchange their thoughts. The more words we learn, the more ideas we get, so that we can communicate the ideas more effectively.

Vocabulary is the most important part that should be mastered in English. Bauer (1998) states that Vocabulary is about words-where they come from, how they change, how they relate to each other and how we use them to view the world." Furthermore Dellar and Hocking in Thonburry, (2005:13) states that "If you spend most of your time studying grammar, your English will not improve very much, you will see most improvement if you learn more words and expression. You can say very little with grammar, but you can say almost anything with words". Without grammar, it can be conveyed, without vocabulary nothing can be conveyed.

All that statements imply that vocabulary is important thing that should not be neglected in language learning, and it is very useful for communication with other people either in spoken or written form. Vocabulary is very important part in learning English language.

### 2.3.1 Types of Vocabulary

Thornbury (1999:67) divided vocabulary to teach into eight different classes. They are:

1. Nouns : bits, record, player.
2. Pronouns : I, them.
3. Verb : like, looking, doing.
4. Adjectives : old, beautiful.
5. Adverb : up, there.
6. Prepositions : for, like.
7. Conjunction : and.
8. Determiner : the, this.

There are kind of vocabulary. Different expert has different kinds of vocabulary. But it has the same sense. In this research, the writer chooses Thornbury's theory related on the kinds of vocabulary.

### 2.3.2 Principle in Teaching Vocabulary

Vocabulary achievement is one of the priorities in English. In obtaining the purpose of teaching vocabulary, the teacher should be aware as guidance for the teacher before teaching vocabulary. They help the teacher to create the class more enjoyabie. The teache is also suggested to concern with these principle in teaching vocabulary to avoid the boredom of the students while teaching learning process.

Learning vocabulary in the mother tongue and in the target language, the students must provide both types of teaching. It is important for the students to know the word whether in source language or in the target language.

It is impossible for the students to master all vocabularies of certain language. They may look up dictionary without understanding all meaning. By making inference from the context, the students can understand the words. The teacher should notice all of the principles above in teaching vocabulary. These principles are also as the practical hints before teaching vocabulary. Therefore, the teacher must surely understand above it in order to achieve the purpose of teaching vocabulary itself.

Wallace (1998: 17), there nine principles in teaching vocabulary that should be noticed by teacher, namely :

1. Aims

The teacher has to be clear about his/ her aims in teaching vocabulary. How many words that should be mastered by the students within a meeting and what the teacher expects the student to be able to do.

## 2. Quantity

The teacher should be aware of how many new words can be learn by the students. The teacher has to select the words that are necessary to the level of the students proficiency.
3. Need

Vocabulary is presented in responding to the students' own need. Therefore, the teacher must know what vocabularies that the students need to know, it is very useful for the students in order to do the task given.

## 4. Frequent Exposure Repetition

It is seldom, however if the students remember a new word simply by hearing it once. There must be certain amount of repetition to access the target word evidently.

## 5. Situational Presentation

Using word must be related to situation. The teacher should be able to emphasize that a certain word must be in a right situation.

## 6. Meaning Presentation

The students must have a clear and specific understanding of what it denotes or refers to. The words should be presented in such a way that its denotation or reference is perfectly clear and unambiguous.

## 7. Presentation in Context

The meaning of words can be influenced by other factors in a context. It is important to the students to know the appropriate collocation where a word occurs. The circumstances that are occurred in every event can influence the meaning of a word.

### 2.4 The Assessment for Vocabulary

Assessment is a popular and sometimes misunderstood term incurrent educational practice. Assessment, on the other hand, is an ongoing process that encompasses much whether domain. Whenever a student responds to a question, offers a comment, o tries out a new word or structure, the teacher subconsciously makes and assessment of the students' performance.

Assessment may emphasize the measurement of vocabulary breadth, vocabulary breadth refers to the quantity of words for which students may have some level of knowledge. Multiplechoice tests at the end of units or standardized tests tend to measure breadth only. The breadth of the test itself may be extremely selective if it is testing only the knowledge of words from a particular story, a science unit, or some passive understanding of the world like a basic definition or synonyms.

### 2.5 Media

Media is every tool to convey information or message from one place to another place. In teaching learning process also use media to make the process run effective and interesting. This part describes definition of teaching media, and kinds of teaching media.

### 2.5.1 Teaching Media

Teaching media based on Arsyad (2009:4) is a media that bring instructional purpose of massages or information of learning. Media is means of expressing massage and information. In general, teaching a new language and vocabulary to young learners can be considered as a challenging job. To help children find language classes, especially vocabulary lessons more interesting, and to facilitate learning a foreign language for them, EFL teachers have employed some instructional games. The present study aimed at determining of effect of games specifically, Tic Tac Toe and flash card on vocabulary gain of young EFL learners. They were divided into two groups, control and experimental. The control group was exposed to textbook vocabulary through the traditional method while the experimental group was taught by Tic Tac Toe game and flash cards. The employment of a pretest and a posttest allowed the instructors to
evaluate the effectiveness of their instruction and assess the acquisition of vocabulary. After analyzing the test results, it was found that applying games has an important and determining role in teaching vocabulary to zero beginners. Moreover, the results indicated that flash cards and Tic Tac Toe game as educational tools for training had more positive influence than traditional.

### 2.5.2 Types of Games

You have to learn the rules of the game. And then you have to play better than anyone else. Each player must accept the cards life deals him or her, but once they are in hand, she or he alone must decide how to play the cards in order to win the game. There are many different kinds of two-players games. People may have played a variety of these games such as chess, checkers, backgammon, and cribbage. While all of these games are competitive, many people play them mainly for social purpose.(David Moursund, 2006: 23).

From the above opinions, the writer can conclude that the quote itself teaches us to accept just the way we are, and lead our way by ourselves. The rules of the game are important because it can improves our skill to pass the game easily.

### 2.5.2.1 Flash Card

Haycraft (1978: 102) states that flashcard is cards on which words or pictures are printed or drawn. Studies show that foreign words are learned more easily when associated with actual objects or a corresponding picture, or imagery techniques, or translation (Leutner, 1998: 30). It stands to reason that pictures are motivating and draw learners' attention.

Pictures are suitable media to motivate learners to learn vocabulary and later improve another skills. Pictures can be "stimulus for writing and discussion, as an illustration of
somrthing being read or talked about, as background to a topic and so on" (Hill, 1990: 204). (Moreover Hill, 1990: 34) also lists several advantages of pictures, such as availability (one can get them in any magazines, on the internet, etc.): they are cheap, often free; they are personal (teacher selected them); flexibility- easily kept, useful for various types of activities (drilling, comparing, etc.). The advantages of pictures above indicate that pictures are multifunctional devices. Again, pictures can be efficiently developed and demonstrated by teachers in classroom activities for learners. However, the success in employing picture as interesting language teaching media depends on teacher's creativity.

The use of picture in English vocabulary teaching has its function as an interpreter that helps the learners get the 'Big Picture' and meaning as well. The primary function of a visual as a communication device is to serve as a more concrete referent to meaning than the spoken or written word. Words are arbitrary symbols. The meaning of a word is easy to understand if it is associated to picture that illustrate the word appropriately. However, three or more words cannot be illustrated effectively by picture. Hence, the use of picture in English vocabulary teaching for learners seems practical in preparation and administration but not in process. Another matter is the question of how to use pictures to teach vocabulary effectively. Including variety of stimuly in teaching is important but not enough. It is essential for the teacher to find the balance and not to use pictures or visuals only but to combine them with other different techniques.

There are many media in teaching vocabulary, one of them is by using flashcard. Flashcard is one of teaching media that is very appropriate to young learners. As a media, flashcards are a really handy resource to have and be useful because they are a great way to present, practice and recycle vocabulary. Flashcard can be a great way to introduce new vocabulary, so that the learners have a very clear understanding of the word or concept. Besides
that, students are more curious rather that just flipping through the cards and having students repeat the words, incorporate the cards into activities. So, they can remember some vocabularies that they have studied before.

There some ways to play Flash Card with Group:
Speed Lines: Have the students in two lines facing each other. The first students in rach lines are the players. Show a flashcard and the first students to correctly name it is the winner. These students then go to the back of their respective lines and you repeat the process with the next two students. If both students say the name of the card together, let them janken to decide the winner. A very important ingredient is the speed. Have lines of unequal number so that on progressive rounds the students are playing with different people.

Race Track: Put the flashcards like a race track with a start and finish lines on the whiteboard. Students play in teams. Player 1 rolls the diceand moves a counter along the track. The player 2 must say the flashcard landed on and if wrong must move back to the original position. (Variation: put in some 'throw again" cards) and a nominate a 'crash' number on the die (e.g. if a students throws a 6 they crash and must stay where they are and miss a turn).

(Image source: Https://www.eslflashcards.com/set/action-flashcard-set-b/ )

### 2.5.9. Noughts and Crosses game

Noughts and Crosses, or Tic-Tac-Toe(XoXo or TTT), is a game of limited scope. For instance, it has the property that the second player can always force a draw however the first player moves. As such, it is at best a test of endurance. The ordinary game is played on a single three by three framework of squares in two dimensions. A logical step in finding an improved game was to try playing it n three dimensions on a board with depth as well as height and width.

Tic-tac-toe (American English), noughts and crosses (British English), is a paper-andpencil game for two players, X and O , who take turns marking the spaces in a $3 \times 3$ grid. The player who succeeds in placing three of their marks in a horizontal, vertical, or diagonal row wins the game.(https://en.m.wikipedia.org/wiki/tic-tac-toe)

To begin, we will look at the game of tic-tac-toe (TTT). TTT is a two-players game, with players taking turns. One players is designed as X and the other as O.A turn consist of marking an unused square of a $3 \times 3$ grid one's mark ( an X or an O ). The goal is to be the first to get three of one's marks in a vertical row, horizontal row, or diagonal row. The board contains eight such rows. Traditionally, X is the first player.(David Moursund)

The following example game is won by the first player, X :

(Image source: https://en.m.wikipedia.org/wiki/tic-tac-toe)

### 2.6 Previous Research

The writer took the review of relate literature from other graduation paper as the principle or comparisons with this research. The first one was taken from Siska (2011) entitled Improving

Students Vocabulary Achievement Through Picture Media, the main purpose of the thesis ws to describe how to use Picture Media in improving vocabulary of the students and how to find out the advantages and disadvantages of Picture Media in teaching vocabulary. The similarities with this study are the use of game in teaching vocabulary. The differences are the kinds of the teaching media, in which the study uses Picture Media game while this study uses Noughts and Crosses game.

The other was from Sari (2016) entitled The Effect Of Using Dice Game On Students' Vocabulary Mastery, the main purpose of the thesis was to find out the effect of the use of Dice Game in vocabulary mastery and the advantages and disadvantages of Dice Game in teaching vocabulary. The similarities with this study are the use of game in teaching vocabulary. The differences are the kinds of the teaching media, in which the study uses Dice game while this study uses Noughts and Crosses game.

### 2.7 Conceptual Framework

Vocabulary is useful lesson which students need. Teacher should create an interesting technique to teach vocabulary to students. So they can be easier to understand and remember all the words that they have learned and improved the vocabulary achievement. There are many strategies in teaching process, and for example one of them is Noughts and Crosses.

The students's vocabulary mastery can be seen from their activities in information in learning English. Chosing the proper material is also important to improve student's vocabulary skill. Through Noughts and Crosses media, students will be able to practice, share their opinion and understand the meaning of a new word. Noughts and Crosses also is easy to the students in general. Students can enjoy do the Noughts and Crosses and in another side they improve their
vocabulary. They can be able to make questions to find the answer. Therefore, by using Noughts and Crosses media, it is a better way to improve students' vocabulary achievement. Noughts and Crosses will make the teaching and learning a fun thing to do by the students.

## The Conceptual Framework

The Reasons:

1. Students enjoy studying with using Noughts and Crosses media.
2. Noughts and Crosses


Figure 2.7 The Conceptual Framework Of Marbun, Mia 2019.

## CHAPTER III

## RESEARCH METHODOLOGY

### 3.1 Research Design

This study will be conducted by using classroom action research. (Arikunto,2006:3), Classroom Action Research is conducted to improve the effectiveness of teaching methods, giving task to the students, assessment, etc. Action search as the research design is used in social
and education sciences, primarily is used for social science or reality. Sagor (2005: 11) says that action research is a disciplined process of inquiry conducted by and for those taking the action. The primary reason for engaging in action research is to assist the actor in improving or refining his or her actions. He also says that action research an investigation conducted by the person or the people empowered to take action concerning their own actions, for the purpose of improving their future actions.

Based on the experts' statement given, it can be stated that Classroom Action Research is a process of taking action in classroom to improve teaching method effectively and the outcomes given by learners.

### 3.2 The Subject of the Study

The subject of this study will be one of the classes of nine grade of SMP Swasta Methodist 7 Medan, North Sumatra. The numbers of the students in the class are 27 students.

### 3.3 The Instrument of Collecting Data

The data will be collected by using quantitative data. In collecting the quantitative data, the writer will use multiple choice tests. The writer will give the vocabulary test to know students' achievement. The test consisted of 25 items.

### 3.4 The Procedure of Collecting Data

The Procedure of Collecting Data will be conducted in 3 meeting. Each meeting will have four steps, namely planning, action, observation, and reflection.

### 3.4.1 Cycle 1

1. Planning

Planning is the first step in classroom action research. In this step, the writer will plan detail about the activities. The actions will be:

1. Knowing the students' problem in learning vocabulary in the classroom.
2. Preparing the pre-test as instrument for collecting the data.
3. Preparing the lesson plan and media.
4. Preparing the teaching material in learning and teaching vocabulary through Noughts and Crosses media.
5. Preparing the instrument for collecting data such as: Observation sheet, Questionnaire sheet and Interview sheet.
6. Conducting a test to know students' achievement in English vocabulary through Noughts and Crosses media.

## 2. Acting

In this step, the writer will apply the lesson plan. After that, the writer will ask students to mention all the words that related to the topic. Then, divide students in pairs or group and gave them a piece of paper which consisted of a word related to the topic. And the writer will guiding them to make description about the word by using questions. Each group will choose one person as a leader to talk about. After that, ask the leader of group to tell their discussion or their answering. The rest of group will guess what she or he meant.

## 3. Observing

Observation will be use observation sheet, interview sheet, and questionnaire sheet. This observation is to find out information about students attitudes, the activities, and atmosphere during the teaching learning process. Not only to know them only, but also to collect data.

## 4. Reflecting

The relection will be carried out in order to analyze the situation and made conclusion what to do next. In this step, the writer reflected everything such as written test, interview sheet, and observation sheet.

### 3.4.2 Cycle 2

The writer will doing the second cycle because the result of teaching process did not reach the goal determined. The purpose of second cycle is to improve or prove the data in cycle 1.

The researcher will be conducted some activities in this phrase as follows.

1. Identifying the new problem in cycle 1 .
2. Revising the lesson plan.
3. Selecting the suitable material.
4. Preparing students' assignment and post test.
5. Preparing the questionnaire sheet and observation sheet.

### 3.5 Scoring for the Vocabulary Assessment

The test will use multiple choice test. There will be about twenty questions for each cycle. In scoring the vocabulary test, it will be determining the rank from $0-100$ by accounting the correct answer. The scoring of the answer will be applied by the following formula: $S=\underline{R} \times 100$

N

Note:
$S=$ Score of the the test.
$\mathrm{R}=$ The number of correct answer.
$\mathrm{N}=$ The number of the question.

### 3.6. The Technique of Data Analysis

This study will be applied qualitative and quantitative data. The qualitative data will use interview sheet, observation sheet, and questionnaire sheet. The qualitative data will use to describe data which are not amenable to being counted or measured in objective way, and are therefore subjective.(Wallace. 1998:38)

The quantitative data will be used to analyze the score of the students. Quantitative data will be used to describe what can be counted or measured and therefore be considered objective(Wallace, 1998: 38).

The steps in doing the data analysis:

1. Collecting the data from the students score
2. Comparing the score between cycle 1 and cycle 2
3. Calculating the percentage of the students' score
4. Making conclusions

Below is the formula to know the mean of students' score of assessment:
$X=\sum \underline{X}$
N
Note:

X $=$ Students
$\sum \mathrm{X}=$ Total score
$\mathrm{N} \quad=$ The number of question

